

REMARKS

Claims 1-6 were previously pending in the application.

Claims 1-6 stand rejected.

Claims 1, 3 and 5 are amended.

New claim 7 is added.

Support for the limitation can be found in FIG. 3 and the accompanying text.

No new matter is added.

With entry of this amendment, claims 1-7 remain in the case.

Applicant requests reconsideration and allowance of the claims in light of the above amendments and following remarks.

Claim Rejections - 35 U.S.C. § 102

Claim 1 is rejected under 35 U.S.C. 102(b) are being anticipated by Hijikata et al. (U.S. Patent 5,254,214). The rejections are respectfully traversed.

Claim 1 is amended to recite, "said plasma electrode is of a truncated dome shape."

Nowhere does Hijikata teach or disclose a plasma electrode being of a truncated dome shape. Hijikata, at col. 4, lines 13-48 and Fig. 3, merely teaches a tubular electrode 206 having the same inner diameter. With this tubular electrode 206, a uniform plasma gas distribution cannot be achieved across the wafer surface, as in the claimed invention using the plasma electrode of a truncated dome shape.

Furthermore, col. 5, lines 35-37 of Hijikata states that a cap-shaped upper tubular electrode 206 cover the entire smaller-diameter portion 202a of the chamber 202. Thus, Hijikata does not teach or disclose the above limitations.

For this reason, Hijikata does not teach or disclose all of the limitations of claim 1 and does not anticipate claim 1. Thus, Applicants respectfully request that the section 102 rejection be removed.

Claim Rejections - 35 U.S.C. § 103

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hijikata et al (5,254,214).

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hijikata et al. (5,254,214) and Takagi et al (U.S. Patent 4,539,068).

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hijikata et al. in view of Ong et al (U.S. Patent 5,645,900).

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. Patent 6,287,981) in view of Collins et al. (U.S. Patent 6,077,384).

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (6,287,981) in view of Collins et al. (6,077,384) as applied to claims 1 and 2, and in view of Pang et al. (U.S. Patent 6,193,802), Takagi (4,539,068) and Ong et al (5,645,900).

The rejections are respectfully traversed.

None of the cited references teach or disclose the limitations of the claimed invention recited in 1-6, for example, "said chamber having an upper part with a dome configuration, ... said plasma electrode is of a truncated dome shape to cover said upper part."

Thus, the cited references, either alone or in combination, do not teach or suggest all of the limitations of claims 1-6. Accordingly, the rejection does not present a *prima facie* case of obviousness. For example, Kim does not teach or disclose a truncated dome shape electrode, but just a regular dome without any opening on top thereof. As another example, in Collins, no such truncated dome shape electrode is shown. Further, in Collins, processing uniformity is obtained by controlling gas flow rate, not by controlling the plasma power applied to the process gas using the truncated dome shape electrode as in the present invention. Thus, there is no need in Collins to use the electrode of the claimed invention.

Therefore, claims 1-6 are allowable.

Also, with respect to claim 7, for the reasons discussed above, none of the cited references teach or suggest, "the inner diameter of the electrode gradually becomes smaller from the bottom of the electrode toward the top of thereof," as recited in claim 7. For example, Hijikata merely shows a tubular electrode, in which the diameter of the electrode is the same from the top and bottom thereof. Thus, claim 7 is also allowable.

CONCLUSION

For the foregoing reasons, reconsideration and allowance of claims 1-6 of the application as amended is solicited. The Examiner is encouraged to telephone the

undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

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Limited Recognition Under 37 CFR § 10.9(b)

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